



Capital Raising

Additional \$1.1M received following closure of the rights issue.

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DFT on track

Arup mid-way through detailed engagement with Loy Yang Power to obtain all key process and locational data.

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K-Coal MoU signed

Key players recognise the environmental and commercial benefits of Coldry

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Welcome

Dear Shareholders,

Welcome to the first of our 2012 updates.

I'd like to start by acknowledging you, our shareholders, for your ongoing commitment as we continue to deliver in line with our stated commercialisation strategy.

The ECT Board has a policy of communicating with and informing shareholders of all significant developments at the company and has developed this Shareholder Update as one means of communicating with shareholders on a regular basis. It is intended that we provide these updates on a quarterly basis.



In this update we cover a broad range of activities in depth. We trust this proves informative and welcome your feedback.

We look forward to providing a further update in three months time.

Sincerely,

Michael Davies
Executive Chairman and Managing Director



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The Coldry Pilot Plant, located near Bacchus Marsh, Victoria has undergone significant activity as part of the Design for Tender program being conducted by Arup. The foreground shows Coldry pellets while raw Loy Yang coal sits in the background waiting to be processed.

1. Capital Management

As advised to the market, the Environmental Clean Technologies Limited Non-Renounceable Rights Issue closed on 23rd December 2011 with \$2.2m of the anticipated \$3.8m raised over the period.

As further announced on 10th January 2012, the Company has secured an additional \$695k by way of a placement, with a further \$405k to be placed subject to shareholder approval.

These efforts provide the Company with \$3.3m of immediate working capital and the ability to finalise Phase 1 of the Design for Tender (DFT) program.

The Company's capital program is focused on:

1. Responsible budgeting and conservation of cash-on-hand
2. Active management of outstanding hybrid debt instruments with a view to minimising, where possible, the dilution on shareholders caused by the issuance of additional shares in satisfaction of the debt
3. Identifying capital sources for the delivery of Phases 2 & 3 of the Design for Tender Program

During the course of the "road show" in support of the Non-Renounceable Right Issue, a number of shareholders expressed a strong preference for additional "face-to-face" briefings from ECT's team.

To this end, a set of briefings will be conducted in the second quarter of 2012.

The Company wishes to acknowledge the efforts of its advisory team from Greenard Willing, led by Glenn Fozard. As shareholders will appreciate, capital markets have been extremely volatile, with confidence battered by global events. Accordingly, the successful completion of the capital program over the past four months is the result of a good plan, well executed and solidly backed by our committed shareholders.

2. Accessing Rebates for Research & Development (R&D) Expenditures

We are pleased to advise that ECT has been successful in claiming substantial cash rebates of its Research and Development expenditures through the Australian Taxation Office.

\$188,000 was received as an R&D rebate for the 2009/10 tax year and \$364,000 was received this month for the 2010/11 tax year.

Furthermore ECT will file amended taxation returns for two previous years where we have determined that the R&D claims were understated.

We are also in the process of determining how to best leverage the various further R&D and Commercialisation support programs available from the Australian Government.

3. Coldry Technology and Next Phase of Development

The DFT program will deliver to ECT the detailed engineering required for a 2 million tonne per annum (mtpa) Coldry plant comprising multiple modules. The DFT engineering will enable determination of likely operating costs and will enable ECT to seek bids from qualifying constructors for the building of the 2 mtpa plant. In effect, use of the DFT engineering output will provide ECT with operating and capital cost estimates, within defined limits, for a large-scale plant.

Research and Development, in the case of a process like Coldry, involves the incremental scaling-up of capacity to achieve commercially viable production. These steps mitigate the risk of failure by ensuring learning's are achieved in logical sequence and at reasonable cost while limits in scalability are identified. Coldry has followed this scale-up pathway, from lab-scale in the early 1980's through to batch scale, then pilot scale by 2004 under the Calleja Group. ECT have advanced the pilot plant in collaboration with JC Steele to refine the operational parameters, gathering data

to inform the detailed design of the commercial scale plant currently under way by Arup.

ECT intends to demonstrate the economics of commercial scale Coldry production in Victoria by building and operating a single module (150,000 to 200,000 tpa) commercial scale production facility. ECT is advised that the relevant coal industry "test" for commercial scale production is of this order (often expressed as 500 tonnes per day). Following clear demonstration of capability, capacity, capital and operating cost from this single module deployment, ECT envisages the expansion into, firstly, the full 2 mtpa as per the DFT, with further capacity increases as logistics, demand and investment interest develops.

ECT has developed a draft proposal seeking investment in such a facility; this is elaborated on in **item 11** following.

4. Status of Coldry and Matmor Intellectual Property

The last six months has been eventful in terms of progressing Coldry IP protection globally. In this period, formal patents were granted in two significant and key geographies – China and the USA. In the last days of 2011, we were also notified that the Canadian patent was granted, and ECT is now waiting for the formal issuance.

In Australia, as shareholders are already aware, the process for the granting of the Coldry IP patent continues. An objection was received by IP Australia from another party seeking to prevent the issuance of our patent. The Directors are confident the objection is without foundation and expect that the Coldry Australian patent will be issued in due course. However, these procedures can take time, and the Directors will keep shareholders updated on progress.



5. Matmor Technology and Next Phase of Development

As previously advised, ECT has completed the developmental scoping work associated with our current 1 tonne per day Test Plant.

The next stages for our Matmor technology are associated with the development of a Detailed Design for a Pilot Plant at larger scale - approximately 6,000 tonnes of iron per year, and then the construction and operation of that Pilot Plant. That would then provide data for further scale up to commercial scale operations.

ECT is currently seeking partners to collaborate in this next phase of activities. Partners would ideally bring metal technology expertise and investment appetite to the venture, in return for which they would share in the benefits of the commercialised technology.

Globally, iron and steel consumption growth is most significant in India as that nation enters a significant period of industrialisation and infrastructure development. India's domestic steel production growth is striving to match the increases in demand, however it will be difficult to achieve given that India has virtually zero reserves of coking coal. Given this, Matmor technology offers a unique opportunity - decoupling the production of iron from the need to secure coking coal supplies. It is with this in mind that we have commenced early discussions in India seeking interested parties to join with ECT on the commercialisation of Matmor. Early discussions with some of the major Indian steel producers have been encouraging.

6. Status of Design for Tender Program

Phase 1 of the DFT program is continuing, and has re-started activity following a short break over the holiday period. The schedule is largely unchanged, with Arup now mid-way through their detailed engagement with Loy Yang Power to obtain all key process and locational data to incorporate within the design. Phase 1 is fully paid.

7. Commentary on the Effect of the Carbon Tax for ECT and Australian Mining and Power Generation Industries

While the effects on the domestic power generation industry have been speculated upon widely, there are few clear signals from the Victorian generation sector on exactly how they will be responding to the introduction of the carbon tax.

It is likely that, while one or more local generators have submitted tenders for the facilitated closure program, 1,000 MW or more of Victorian generation capacity may be closed, though only after replacement capacity has been designed, built, installed, commissioned and proven reliable. This may take 5-10 years to accomplish. Meanwhile, efficiency improvements that drive down CO₂ emissions have significant cash value. These may be simply achieved by using a blended fuel comprising raw lignite and Coldry pellets. This is the medium term potential opportunity ECT see coming from the implementation of the Carbon Tax in July this year.

Longer term, ECT see greater domestic opportunity in CO₂ mitigation in the development of new technology generating equipment as well as the conversion of (Victorian) coal into other fuels and value-added chemicals.



Matmor Research Manager Keith Henley-Smith produces an Iron sample from Indian lignite and millscale (Fe₃O₄).



8. Tincom and the Victoria Coldry Project

As advised in October 2011, ECT signed an agreement with Tincom of Vietnam to progress development of the Victoria Coldry Project, subject to certain conditions being satisfied.

Under the agreement, ECT is obliged to provide Tincom with all of the engineering detail from the DFT program. Tincom will use the information provided to have a third party expert conduct an independent Feasibility Study in order to satisfy itself of the economics of the project.

As reported above in **item 6**, the DFT program, which was initiated in late October 2011, continues to progress on schedule and the results of Phase 1 are expected to be available in April 2012. Phase 2 will be initiated immediately on completion of Phase 1 and Phase 3 will follow immediately thereafter. We expect to receive the full DFT information pack in October 2012.

As Tincom requires the full information from the DFT program, we expect they will commence their Feasibility Study around November 2012.

In respect of Matmor, the process has a significantly lower CO₂ footprint than traditional blast furnace iron making, making it an attractive option in light of carbon pricing.

9. Recent Meetings in India

ECT Directors had meetings in India during January with several major Indian coal and steel industry participants.

It is understood India recently issued directives requiring all new coal fired electricity generators to source 30% of their coal needs from overseas. This action is intended to reduce consumption of local Indian coal reserves and thereby effectively extend the life of those reserves. Coldry, domestically produced in India, is of interest to the major lignite producers and consumers as it enables more efficient usage of India's lignite reserves. Also the sourcing of Coldry from other locations including Australia (and potentially Indonesia due to its proximity to India) is of real interest as this can provide some of the imported coal necessary to comply with the new legislation. Importing Coldry will also have the effect of extending the life of the lignite reserves in India.

During meetings with Indian steel producers we presented a sample of Matmor produced using Indian sourced lignite; it got their attention. As stated above, India has virtually zero reserves of coking coal but significant reserves of iron-ore. Matmor provides India with the opportunity to become more self sufficient in the production of primary iron and steel by reducing their reliance on the imported coking coal.

10. Recent Meetings in South Korea

At meetings conducted in Busan, Korea during January negotiations were successfully completed with K-Coal Co. Ltd. to enter into agreements with ECT.

A Memorandum of Understanding (MoU), providing K-Coal with exclusive sales and marketing rights for Coldry into South Korea, was signed as was an agreement for K-Coal to provide consultancy services through its President Mr. Eiichiro Makino to assist in the commercialisation of Coldry across Northern Asia, including Korea and Japan.

At the time of the signing, I stated, "K-Coal is well positioned to participate in supplying Coldry coal into the very large and growing thermal coal consumer industry in Korea. K-Coal will build on the very strong relationships its parent company S&J Group has with the major energy companies in the region".

Mr. Makino became President of K-Coal on 1st January 2012, after almost forty years with Sojitz Corporation of Japan and its predecessor company Nissho Iwai Corporation. Mr. Makino is regarded as one of the coal industry's foremost technical and commercial experts.

In respect of the MoU, S&J Chairman Dr. Kim Sung-Ryeal commented "S&J Group evaluated numerous coal drying technologies before we decided on Coldry. We like the fact that Coldry utilises a low temperature and low-pressure process, which means that the water released, is clean. S&J Group is a clean energy company and this is important to us. Also we are confident that ECT's Coldry process is cost effective when compared to other technologies."

Whilst in Korea, ECT personnel met with the Vice Mayor for Economic Affairs for Busan Metropolitan City and the Chairman of the Busan Metropolitan Council together with senior K-Coal and S&J Group executives.

We were very impressed with the support to Busan area companies that the city government provides. S&J Group and K-Coal are well known to the city government and it was evident from our meetings in Busan that there exists a very strong and supportive relationship between the companies and the city government.

S&J Group is a diverse, Busan Korea based group of companies with interests in Energy Distribution, Food Production, Leisure, Clean Technologies and Information Technology.

11. Development of Investment Proposal for first Victorian Pre-Production Coldry facility

As advised above in item 3, ECT intends to demonstrate the economics of commercial-scale Coldry production in Victoria by building and operating a single module (150,000 to 200,000 tpa) production facility. The intended location is Loy Yang, in the immediate vicinity of the Loy Yang A power station.

ECT plans to establish a Special Purpose Vehicle (SPV) for the purposes of constructing and operating this initial production facility.

After demonstrating the economics of Coldry production in this location, ECT proposes to expand the facility progressively to increase production capacity. The final production capacity of the expanded production facility could feasibly be in excess of 20 mtpa as the limit to the number of modules is simply the available waste heat streams.

Preliminary estimates indicate the cost to establish the initial single module pre-production facility at Loy Yang, together with the operating expenses over the first 12 months of operation, will be A\$50m to A\$60m (with significant savings available when executing a multiple module installation). The actual financial consideration for the pre-production facility will be advised on completion of the DFT.

ECT proposes to provide appropriate equity in the SPV and take a shareholding in proportion with its equity contribution.

Other Australian companies have indicated their willingness to consider contributing capital in exchange for appropriate equity, however it is expected that up to 50% of the total equity will be available for other investors.

ECT and its potential Australian co-investors wish to attract globally recognised resource companies and globally significant thermal coal consumers as investors in this project.

Equity investors in the SPV will be entitled to a share of production from the pre-production facility equal to the percentage of equity held by the shareholder/investor.

After proving the economics of Coldry production from Victorian lignite by means of the pre-production facility, ECT will offer the shareholders in the SPV the right to maintain their percentage equity share in an expanded, commercial scale production facility, for appropriate financial consideration. By maintaining their percentage equity share, equity participants maintain their entitlement to a share of production based on the proportion of equity held.

